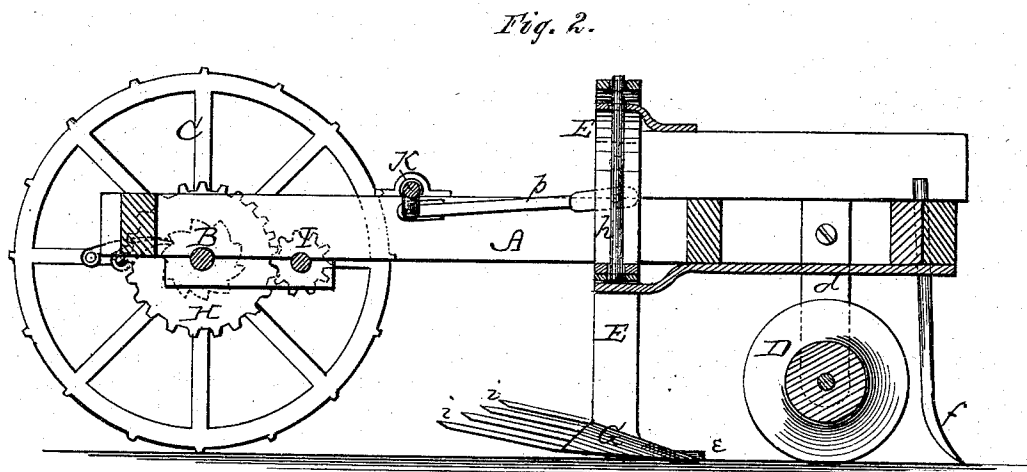
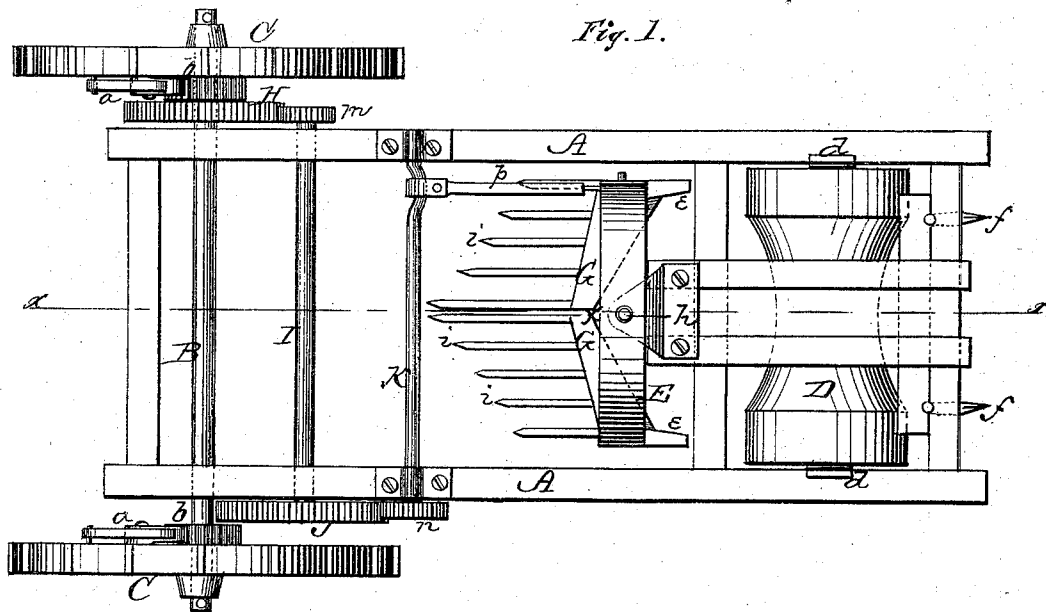


J. NORTON.
Potato-Diggers.

No. 157,631.

Patented Dec. 8, 1874.



WITNESSES:

P. C. Dietrich,
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UNITED STATES PATENT OFFICE.

JAMES NORTON, OF HIGHTSTOWN, NEW JERSEY.

IMPROVEMENT IN POTATO-DIGGERS.

Specification forming part of Letters Patent No. **157,631**, dated December 8, 1874; application filed October 31, 1874.

To all whom it may concern:

Be it known that I, JAMES NORTON, of Hightstown, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Potato-Diggers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, with letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a potato-digger, which shall be simple in construction, durable and effective in operation, and not liable to get out of order, as will be hereinafter more fully set forth.

In the annexed drawing, Figure 1 is a plan view of my machine; and Fig. 2 is a longitudinal vertical section of the same through the line *x x*, Fig. 1.

A represents the frame of the machine, constructed in any suitable manner, and provided, near its rear end on the under side, with boxes or bearings for the axle B, upon the ends of which are placed the driving-wheels C C, said wheels being connected to the axle by ordinary pawl and ratchet *a b*, so as to turn the axle when moving forward, but turn on the axle when moving backward.

Near the front end of the frame A are suitable hangers, in which is journaled a roller, D, made in the form of a spool—that is, its ends are made of larger diameter than the body—forming as it were two wheels, upon which the front part of the machine is supported. This form of roller accommodates itself to the ordinary form of a potato row; it takes the downward drag off the necks of the horses, and crushes down the vines, that are apt to gather in large masses and clog the movement of the machine; it also rolls on the trash that gathers on the tooth *f*. By making the roller D adjustable up and down in its hangers *d d*, or said hangers adjustable up and down in the frame, the depth at which the plow is to operate may be easily regulated. In front of each end of the roller D is a tooth, *f*, as shown, to gather the trash that would otherwise collect on the frame E. In rear of the roller D, and about the center of the frame, is a vertical shaft, *h*, held stationary in suit-

able braces or bars of the frame. On this shaft is placed an upright frame, E, capable of turning thereon back and forth as on a pivot. To the lower end of each side piece of the frame E is attached a plow, G, which has a point, *e*, projecting forward at its outer end, and from this point the edge of the plow inclines inward and toward the rear. The body of the plow is inclined upward toward the rear, and from its rear edge extend a series of upwardly-inclined rods or bars, *i i*.

It will be noticed that the two plows, G G, do not come together at their inner ends, but leave a small space, *x*, between them, as shown in Fig. 1.

The points *e* may be made separate from the plows, and attached to standards secured to the frame, if so desired.

The frame E, with its plows, is vibrated on the shaft *h* by the following means: On the axle B is secured a cog-wheel, H, which gears with a pinion, *m*, on a counter-shaft, I, and on this shaft is a cog-wheel, J, that gears with a pinion, *n*, on a crank-shaft, K. The crank on the shaft K is, by a pitman, *p*, connected with one side of the frame E, and thus said frame will, when the machine is moving forward, obtain an oscillating or vibrating motion. This motion causes the plows G G to enter the ground easily under the potatoes, and as the plows move forward the potatoes are carried up the incline, the loose dirt falling through between the rods or bars *i i*, while the potatoes are left on top of the ground.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The frame E, carrying or provided with the plows G G, and arranged to vibrate or oscillate upon a vertical axis, *h*, substantially as and for the purposes herein set forth.

2. The combination, in a potato-digger, of the clearing-teeth *f f*, roller D, oscillating frame E, and plows G G, with inclined rods *i i*, all substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own, I affix my signature in presence of two witnesses.

JAMES NORTON.

Witnesses:

C. H. WATSON,
H. C. SCOTT.